

Health · Second Opinion

## How vaccines can crush the variants and make reopening permanent in Canada

Unvaccinated Canadians are a 'tinderbox' that threatens Canada more than variants, experts say

[Adam Miller](#) · CBC News · Posted: Jun 12, 2021 4:00 AM ET | Last Updated: June 12



People receive their COVID-19 vaccine at the 'hockey hub' mass vaccination facility at the CAA Centre in Brampton, Ont., on June 4. Experts say getting vaccinated is the biggest step Canadians can take in controlling variants. (Nathan Denette/The Canadian Press)



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Canada is poised to battle back the more contagious coronavirus variants that threaten to jeopardize reopening plans across the country due to a huge uptick in vaccine supply, a willingness from Canadians to get the shots and some promising new vaccine research.

Daily COVID-19 cases, hospitalizations and deaths have [dropped dramatically](#) across the country to levels not seen since the fall, while shipments of vaccines are set to grow substantially — with [more than 5.3 million doses](#) arriving next week alone.

To date, [more than 28 million vaccine doses](#) have been administered across Canada, about [72 per cent](#) of eligible Canadians have at least one shot and close to [12 per cent](#) have two.

Yet there have been growing concerns over the spread of variants that have raised doubts about whether we can safely reopen society in Canada's hardest hit regions, particularly as the [United Kingdom grapples with the variant known as delta, or B.1.617](#).

Despite the many uncertainties that lie ahead, experts say that early data from the U.K. and a new study just released in British Columbia point to the same way forward — getting as many shot in arms as soon as possible.

## Variant vs. vaccines

[A recent study from Public Health England \(PHE\)](#) looked at just how effective the first dose is against the delta variant.

The study found the Pfizer-BioNTech vaccine was 88 per cent effective against symptomatic disease from the delta variant two weeks after the second dose, compared to 93 per cent against the B.1.1.7 variant, also known as alpha.

Two doses of the AstraZeneca-Oxford shot were found to be just 60 per cent effective against COVID-19 symptoms from delta, compared to 66 per cent against alpha.

And a single dose of Pfizer and AstraZeneca were each only about [33 per cent effective](#) against delta.

- [New COVID-19 cases have dropped 80 per cent — and 5.3 million more shots are set to arrive next week](#)

Experts say it's important to remember that the study looked at the vaccine's ability to prevent COVID-19 symptoms, which can range from mild to severe, and the early estimates on vaccine effectiveness against the variants don't tell the whole story.

"One dose of the vaccine, whether it was Pfizer or AstraZeneca, still actually provided quite a bit of protection against severe illness and certainly against hospitalization," said Prof. Jason Kindrachuk, an assistant professor and Canada Research Chair in emerging viruses at the University of Manitoba.

"Yes we still need to get two doses, but you know what? Even with a single dose these vaccines work amazingly well."

Kindrachuk says that while delta reinforces the need to fully vaccinate high-risk individuals, like older Canadians and the immunocompromised, getting shots into as many arms as possible will continue to lower community transmission and the spread of variants overall.

"Any population that isn't vaccinated is a tinderbox that's waiting to explode and drive lots of cases and hospitalizations and new variants," said Prof. Alyson Kelvin, an assistant professor at Dalhousie University and virologist at the Canadian Center for Vaccinology and the Vaccine and Infectious Disease Organization in Saskatoon.

"The best thing that we can do is stick to a vaccination plan and keep going with it until our entire population is covered by not just one, but two doses. That's going to be the most effective strategy — not trying to get too caught up in the drama of a new variant."

***WATCH / How does the delta variant impact vaccine rollouts and reopening?***



## How does the delta variant impact vaccine rollouts and reopening?

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Two infectious diseases specialists answer questions about the delta coronavirus variant — first identified in India and also known as B.1.617 — including how it could impact vaccine rollouts and reopening plans in Canada. 5:12

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## Single dose has 'substantial' protection

New Canadian research from the B.C. Centre for Disease Control (BCCDC) also underscored the effectiveness of even just one dose of mRNA vaccines against the variants and provided new insight into the [gamma variant](#), also known as P.1, for the first time.

[The preprint study](#), which has not yet been peer reviewed, found that a single dose of either Pfizer or Moderna cut the risk of COVID-19 for older adults by about two-thirds during the peak of the spring wave in B.C.

The observational study looked at close to 17,000 people aged 70 and older between April 4 and May 1 — a critical time when both the alpha and gamma made up about 70 per cent of cases circulating in the province.

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The researchers also concluded that single dose protection for older adults was only "minimally reduced" against alpha and gamma, which they said "reinforces" [Canada's decision to defer second doses](#) of COVID-19 vaccines at a time when supply was limited.

"Even at the peak of the pandemic and even with most viruses being these variants of concern, we showed substantial reduction in risk amongst vaccinated older adults compared to unvaccinated adults," said Dr. Danuta Skowronski, the epidemiology lead at the BCCDC and lead author of the study.

"It's particularly meaningful because this single dose protection was provided during that substantial third wave — the peak of the pandemic for us in B.C."

Dr. Danuta Skowronski says researchers at the BCCDC have their sights set on researching vaccine effectiveness against the delta variant in the near future. (CBC)

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Skowronski says the study provides the world's first vaccine effectiveness estimate against the gamma variant and was made possible due to the unique position B.C. found itself in, with multiple variants circulating at the same time unlike anywhere else in the world.

"We were able to derive and show that protection was maintained against P.1, which remained an open question globally," Skowronski said. "So we have addressed that question and shown comparable protections to B.1.1.7."

While BCCDC researchers weren't able to analyze vaccine effectiveness against the delta variant, which had not yet been circulating widely in Canada at the time, Skowronski says the

team has their sights set on it in the near future.

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"Looking at the data, we can be optimistic that we'll have a good per cent effectiveness against delta," said Kelvin, who was not involved in the study.

"Of course we want everybody to get the second dose but I still am very optimistic."

But Skowronski cautions Canadians not to draw too many conclusions from the data emerging from the U.K. on the delta variant, or any one study, due to the fact that it's largely observational and needs to be backed up by real-world immunogenicity research, which measures the immune responses that a vaccine generates.

"It's a signal of concern related to a variant of concern that warrants further evaluation, which is why we're on it," she said. "Then we can react."

## 'Get the second dose'

Experts agree the biggest threat to Canadians at the moment isn't variants — despite the dizzying pace of research being released worldwide — it's not being vaccinated at all.

"So far for the variants that we have encountered, about which there has been initial shock and awe and then some settling of that, we've not seen a big impact," Skowronski said.

"Ultimately, we still want to get the second dose in and this is helping us reinforce and understand why that may be necessary."

Allison Downing, a registered nurse, prepares the Pfizer-BioNtech COVID-19 vaccine at a vaccination clinic in Dartmouth, N.S., on June 3. Experts agree the biggest threat to Canadians at the moment isn't variants — it's not being vaccinated at all. (Andrew Vaughan/The Canadian Press)

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Kelvin says the decision to delay second doses in Canada allowed for more single dose coverage, which ultimately prevented the virus from infecting more people, increasing hospitalizations and deaths and may have stopped the emergence of new variants here.

"What we want to watch for is: are these viruses changing significantly? ... We want to keep on top of what's going on with new variants," she said.

"What we can all do is get vaccinated and try to reduce our contacts to reduce the opportunity for the virus to mutate — that's going to be the biggest role that we can play in controlling variants."

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Kelvin says if Canada continues to drive COVID-19 levels down across the country, we should be able to maintain low levels of community transmission — which will largely be driven by pockets of people who aren't vaccinated.

"We're in a very different position than we were certainly in the early parts of this year," said Kindrachuk.

"Vaccinations are going to keep getting out and once we hit that threshold, things are going to change very, very quickly. I think they already are, but I think they're going to change

substantially in the next few weeks."

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